

In the Office Action, the Examiner rejected claim 24 under 35 U.S.C § 112, second paragraph; rejected claims 1 and 25 under 35 U.S.C § 103(a) as being unpatentable over Watney (U.S. Pat. No. 5,930,398) taken with Shau (U.S. Pat. No. 6,404,670) in view of Kobayashi et al. (U.S. Pat. No. 4,859,871); rejected claims 2, 3, 26, and 27 under 35 U.S.C § 103(a) as being unpatentable over Watney taken with Shau in view of Kobayashi et al. as applied to claims 1 and 5 and further in view of Ng et al. (U.S. Pat. No. 5,847,616); rejected claims 7, 14, and 29 under 35 U.S.C § 103(a) as being unpatentable over Furuhashi et al. (U.S. Pat. No. 5,850,540) taken with Smeets et al. (U.S. Pat. No. 6,218,968) in view of Taguchi (U.S. Pat. No. 5,815,080); rejected claims 8 and 30 under 35 U.S.C § 103(a) as being unpatentable over Furuhashi et al. taken with Smeets et al. in view of Taguchi as applied to claims 7 and 29 and further in view of Kondo (U.S. Pat. No. 6,222,398); and objected to claims 4, 5, 9-13, 15, 28, and 31-33 as being dependent upon a rejected claim but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The rejections and objection of these claims is traversed and reconsideration of the claims is respectfully requested in view of the following remarks.

The Examiner rejected claim 24 under 35 U.S.C § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention because claim 24 depends upon canceled claim 17. Applicant respectfully submit that the rejection of claim 24 is moot in view of the amendment to claim 24.

Applicant appreciates the indication of allowable subject matter in claims 4, 5, 9-13, 15, 28, and 31-33, which were objected to as being dependent upon rejected base claims, but

would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims.

The rejection of claims 1 and 25 under 35 U.S.C § 103(a) as being unpatentable over Watney taken with Shau in view of Kobayashi et al. is respectfully traversed and reconsideration is requested.

Claim 1 is allowable over the cited references in that claim 1 recites a combination of elements including, for example “at least two bit lines, each bit line transmitting a bit signal having a voltage level; at least two voltage control means connected to the corresponding bit lines, wherein each voltage control means changes the voltage level of the bit line at a different ratio from the other voltage control means; and adder means for adding voltage levels outputted from the two voltage control means to generate an analog signal.” None of the cited references, including Watney, Shau, and Kobayashi et al., singly or in combination, teaches or suggests at least these features of the claimed invention. Accordingly, Applicants respectfully submit that claims 2-6, which depend from claim 1, are allowable over the cited references.

Claim 25 is allowable over the cited references in that claim 25 recites a combination of elements including, for example “n voltage converters coupled to the corresponding output signals, wherein n is an integer and each voltage converter changes a voltage level of the corresponding output signal, and outputs of the n voltage converters are connected to produce a combined output signal in response to voltage levels of the n output signals from the controller, and wherein the combined output signal has a plurality of voltage levels representing nth power of the number of output signals.” None of the cited references, including Watney, Shau, and Kobayashi et al., singly or in combination, teaches or suggests

at least these features of the claimed invention. Accordingly, Applicants respectfully submit that claims 26-28, which depend from claim 25, are allowable over the cited references.

The Examiner cites Watney as teaching “a bus compressing at least two bit lines, each bit line transmitting a bit signal having a voltage level (col. 6, lines 25-39 and Fig. 2). It being understood that data transmission means include data (bit) lines and that the data is represented by voltage levels.” The Examiner then cites Shau as teaching “at least two voltage control means (voltage converters) connected to the corresponding bit lines, wherein each voltage control means changes the voltage level of the bit line at a different ratio from the other voltage control means (col. 28, line 43-47).” The Examiner then states Watney “taken with” Shau “does not teach adder means for adding voltage levels outputted [from] the two voltage control means to generate an analog signal” and relies on Kobayashi et al. to cure the deficiencies of Watney “taken with” Shau. The Examiner cites Kobayashi et al. as teaching “adder means for adding voltage levels outputted [from] the two voltage control means to generate an analog signal (col. 13, lines 27-30).” The Examiner alleges it would have been obvious to “incorporate in the device as taught by Watney the features as taught by Shau in view of Kobayashi et al. in order to include in the system those features necessary to transmit the bit data being input to the at least two voltage converter and in turn generate an analog signal.” (Office Action at 5)

Contrary to the Examiner’s aforementioned conclusions and assertions, Applicant respectfully submits a *prima facie* case of obviousness has not been established at least in rejecting claims 1 and 25. To establish a *prima facie* case of obviousness, (1) the references must teach or suggest all the claim limitations; and (2) there must be at least some suggestion

or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference. M.P.E.P. § 2143.

First, Applicant respectfully submits the cited references, either singly or in common, fail to teach or suggest all the claim limitations.

For example, Applicant respectfully submits at column 6, lines 25-39, Watney states that "... in FIG. 1 image data corresponding... to a video image are applied via an input bus 10 to a means 7 for compressing and encoding the data, whereupon the compressed/encoded data are supplied in a suitable format to data recorder/playback apparatus, or to a transmission channel or other utilization apparatus, as depicted via block 8". Accordingly, Applicant respectfully submits Watney fails to teach at least "a bus compressing at least two bit lines, each bit line transmitting a bit signal having a voltage level" as cited by the Examiner. Further, Watney teaches at column 7, lines 57-58 "The output signal from the encoder circuit 20 may be a serial stream of digital samples of varying numbers of bits." Lastly, in stating "It being understood that data transmission means include data (bit) lines and that data is represented by voltage levels", it appears that the Examiner is relying on Official Notice. The Examiner may take Official Notice of facts outside of the record that are capable of instant and unquestionable demonstration as being "well-known" in the art. *In re Ahlert*, 424 F.2d 1088, 1091, 165 USPQ 418, 420 (CCPA 1970). As set forth in M.P.E.P. § 2144.03, if an applicant traverses an assertion made by an Examiner while taking Official Notice, the Examiner should cite a reference in support of their assertion. Accordingly, Applicant seasonably traverses the use of Official Notice and respectfully requests the Examiner to provide a reference to support their assertions or an affidavit.

In another example, Applicant respectfully submits at column 28, lines 43-47, Shau teaches “Each memory cell further includes a bit-line to have a voltage control means for controlling the bit-line to have a bitline voltage higher, lower, and within a medium voltage range...” Accordingly, Applicant respectfully submits Shau fails to teach at least “at least two voltage control means (voltage converters) connected to the corresponding bit lines, wherein each voltage control means changes the voltage level of the bit line at a different ratio from the other voltage control means” as cited by the Examiner.

Second, Applicant respectfully submits there is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. M.P.E.P. § 2143.01. To establish a *prima facie* case of obviousness, at least some objective reason to modify the reference must be present. M.P.E.P. § 2143.02.

Applicant respectfully submits there is no motivation or suggestion, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, at least to modify Watney with Shau and Kobayashi et al. Applicant respectfully submits the cited references are non-analogous and are therefore not properly combinable. For example, Watney is directed to data compression processes and to a method for determining preferred quantizing factors which limit degradation in data signal quality incurred during multi-generation compression and decompression cycles given a selected cumulative complexity (column 1, lines 15-22). Shau, on the other hand, is directed to high performance semiconductor memory devices (column 1, lines 16-17). Accordingly, Applicant respectfully

submits one of ordinary skill in the art seeking to modify Watney would not turn to the teachings of Shau. Applicant respectfully submits that such combination is suggested only by the claimed invention and to do so would necessitate considerable impermissible hindsight.

The rejection of claims 2, 3, 26, and 27 under 35 U.S.C § 103(a) as being unpatentable over Watney taken with Shau in view of Kobayshi et al. and further in view of Ng et al. is respectfully traversed and reconsideration is requested.

Claims 2 and 3 include all of the limitations of claim 1, as discussed above, and Watney taken with Shau in view of Kobayshi et al. fails to teach or suggest at least these features of independent claim 1 as recited above. Similarly, Ng et al. fails to cure the deficiencies of Watney taken with Shau in view of Kobayshi et al. Accordingly, Applicant respectfully submits that the Examiner has not established a *prima facie* case of obviousness regarding claims 2 and 3 in view of claim 1, as above.

Claims 26 and 27 include all of the limitations of claim 25, as discussed above, and Watney taken with Shau in view of Kobayshi et al. fails to teach or suggest at least these features of independent claim 25 as recited above. Similarly, Ng et al. fails to cure the deficiencies of Watney taken with Shau in view of Kobayshi et al. Accordingly, Applicant respectfully submits that the Examiner has not established a *prima facie* case of obviousness regarding claims 26 and 27 in view of claim 25, as above.

The rejection of claims 7, 14, and 29 under 35 U.S.C § 103(a) as being unpatentable over Furuhashi et al. taken with Smeets et al. in view of Taguchi is respectfully traversed and reconsideration is requested.

Claim 7 is allowable over the cited references in that claim 7 recites a combination of elements including, for example “receiving means for receiving an analog signal formed by

compressing at least n-bit data, wherein n is an integer; quantizing means for quantizing the analog signal from the receiving means; and coding means connected to the quantizing means for coding the quantized analog signal to reconstruct the n-bit data.” None of the cited references, including Furuhashi et al., Smeets et al. and Taguchi, singly or in combination, teaches or suggests at least these features of the claimed invention. Accordingly, Applicant respectfully submits that claims 8-15, which depend from claim 7, are allowable over the cited references.

Claim 29 is allowable over the cited references in that claim 29 recites a combination of elements including, for example “an input line transmitting an analog signal formed by compressing n-bit data, wherein n is an integer; a plurality of level detectors parallelly connected to the input line to output a quantized signal; and a coding device connected to the plurality of level detectors to code the quantized analog signal to reconstruct the n-bit data.” None of the cited references, including Furuhashi et al., Smeets et al. and Taguchi, singly or in combination, teaches or suggests at least these features of the claimed invention. Accordingly, Applicants respectfully submit that claims 30-33, which depend from claim 29, are allowable over the cited references.

The Examiner cites Furuhashi et al. as teaching “receiving means for receiving an analog signal formed by compressing at least n-bit data, wherein n is an integer (col. 2, lines 46-54 and col. 3, lines 9-18 and 41-56).” The Examiner then cites Smeets et al. as teaching “quantizing means for quantizing the analog signal from the receiving means; and coding means connected to the quantizing means for coding the quantized analog signal to reconstruct the n-bit data (col. 12, line 41-44).” The Examiner then cites Taguchi as teaching “a plurality of level detectors parallelly connected to the input line to output a quantized signal

(col. 4, lines 6-13).” The Examiner alleges it would have been obvious to “incorporate in the device as taught by Furuhashi et al. the features as taught by Smeets et al. in view of Taguchi in order to include to put in place the means necessary to decompress compressed data and reconstruct the signal being processed for presentation to a display device.” (Office Action at 7)

Contrary to the Examiner’s aforementioned conclusions and assertions, Applicant respectfully submits a *prima facie* case of obviousness has not been established at least in rejecting claims 7 and 29. To establish a *prima facie* case of obviousness there must be at least some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference. M.P.E.P. § 2143.

Applicant respectfully submits there is no motivation or suggestion, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, at least to modify Furuhashi et al. with Smeets et al. Applicant respectfully submits the cited references are non-analogous and are therefore not properly combinable. For example, Furuhashi et al. is directed to the generation of image data representing a picture which are capable of producing realistic images (column 1, lines 6-8). Smeets et al., on the other hand, is directed to a method and device for encoding/decoding information (column 1, lines 4-9). Accordingly, Applicant respectfully submits one of ordinary skill in the art seeking to modify Furuhashi et al. would not turn to the teachings of Smeets et al. Applicant respectfully submits that such combination is suggested only by the claimed invention and to do so would necessitate considerable impermissible hindsight.



The rejection of claims 8 and 30 under 35 U.S.C § 103(a) as being unpatentable over Furuhashi et al. taken with Smeets et al. in view of Taguchi and furehr in view of Kondo is respectfully traversed and reconsideration is requested.

Claim 8 includes all of the limitations of claim 7, as discussed above, and Furuhashi et al. taken with Smeets et al. in view of Taguchi fails to teach or suggest at least these features of independent claim 7 as recited above. Similarly, Kondo fails to cure the deficiencies of Furuhashi et al. taken with Smeets et al. in view of Taguchi. Accordingly, Applicant respectfully submits that the Examiner has not established a *prima facie* case of obviousness regarding claim 8 in view of claim 7, as above.

Claim 30 includes all of the limitations of claim 29, as discussed above, and Furuhashi et al. taken with Smeets et al. in view of Taguchi fails to teach or suggest at least these features of independent claim 29 as recited above. Similarly, Kondo fails to cure the deficiencies of Furuhashi et al. taken with Smeets et al. in view of Taguchi. Accordingly, Applicant respectfully submits that the Examiner has not established a *prima facie* case of obviousness regarding claim 30 in view of claim 29, as above.

Applicants believe the application in condition for allowance and early, favorable action is respectfully solicited. Should the Examiner deem that a telephone conference would further the prosecution of this application, the Examiner is invited to call the undersigned attorney at (202) 496-7500.

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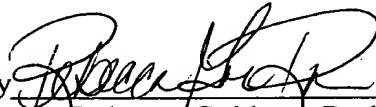
If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136. Please credit any overpayment to deposit Account No. 50-0911.

Respectfully submitted,

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